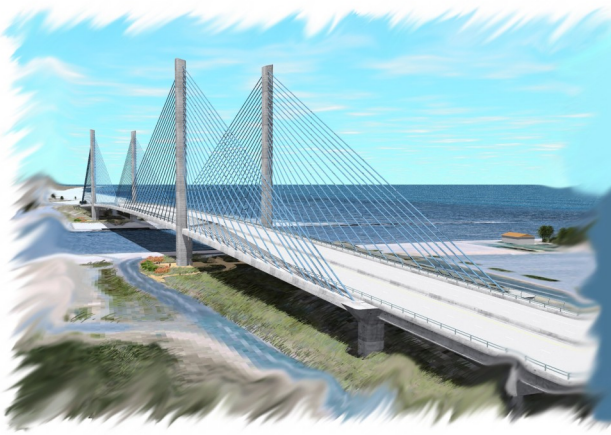


Building for Tomorrow

The Indian River Inlet Bridge Newsletter

A publication by the Delaware Department of Transportation (DelDOT) *January 2011*

Peo Halvarsson (Skanska)

This month's issue of *Building for Tomorrow*, is not so much about the structure of the new Indian River Inlet Bridge, but the environment that it is located in. Most people who visit Delaware only see the beach during the summer months when the weather is warm and welcoming. However, the marine environment that the new bridge is being built in is always changing. Changes in temperature, wind, precipitation, and other factors make building a bridge very challenging.

This month's featured guest is Peo Halvarsson, a Construction Manager with Skanska USA Civil Southeast. Mr. Halvarsson is originally from Sweden, but now calls South Carolina home. He was worked on projects around the world, including the Arthur J. Ravenel Bridge over the Cooper River in Charleston, South Carolina. Besides overseeing the construction of the bridge, Mr. Halvarsson assists with student tours at the site.

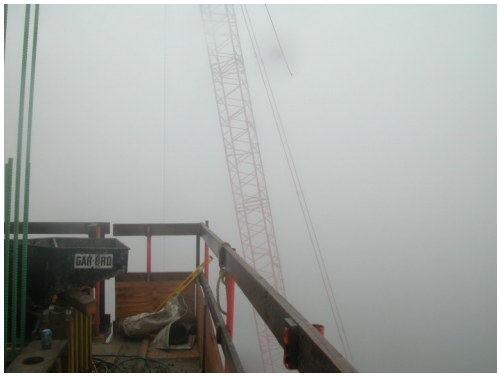
Salt: Good On Fries, Not On Bridges

The winds at the Indian River Inlet Bridge site blow almost constantly and they are carrying a hidden passenger: salt. It's no secret that the area around the ocean is salty, that's why there are things like salt water taffy. However, the salt being carried by the wind is more of a problem to be dealt with than a treat to be enjoyed.

Chlorides (salt) from the sea water can affect steel, like the rebar embedded in the concrete. To make the new bridge last at least 100 years the steel is coated with a layer of protective (green) epoxy paint and is then covered with large quantities of concrete.

These precautions will ensure that the Indian River Inlet Bridge is serving the public for many years to come.

A Beautiful & Harsh Environment: Building at the Indian River Inlet



Fog settles at the site of the new Indian River Inlet Bridge. The weather has played a big role during the construction of the bridge. (DelDOT)

As we mentioned before, the environment at the Indian River Inlet is a beautiful, but difficult. We took a few moments to sit down and ask this month's special guest, Peo Halvarsson of Skanska, a few questions about what it's been like to build the new Indian River Inlet Bridge. This is what he had to say:

What are the environmental challenges Skanska has been faced with in building the IRIB?

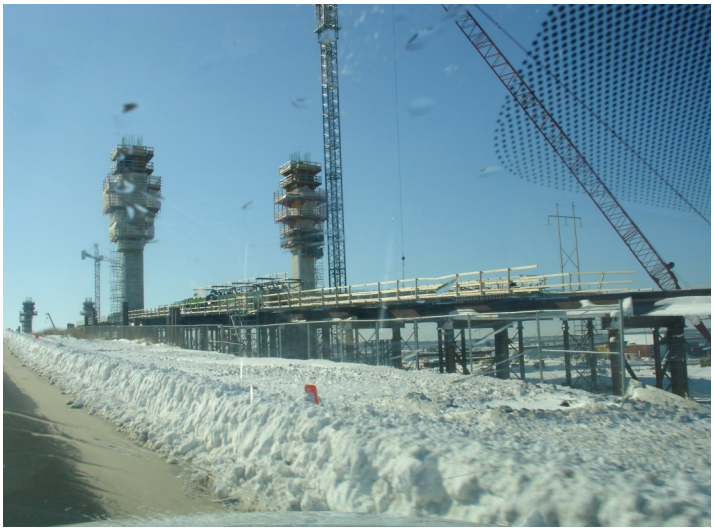
The location of the project along the Atlantic coast is exposed to the elements a great deal. Particularly, during the winter season, wind combined with low temperatures are a real challenge for our workers. We have hardy men and women working on the project who possess great spirit, motivation, and ambition, but understandably it is tough at times. There is no doubt that rain and wind impact construction in a negative way. Things take longer and more precautionary actions to prevent injuries must be taken.

Continued on Page 2

What are the weather related challenges you have faced in building a bridge? Are these unique to working along the East Coast and if so why?

Wind and wind chill are factors that affect people and also construction methods. People don't like to be cold and everybody performs at a lower level if they are. This is true for everyday life and also for construction. The same applies to concrete as it will have to be heated during and after each pour to maintain a temperature within acceptable limits. It takes quite an effort of heating and monitoring to achieve this.

Working along the east coast, north or south, you find the wind being pretty much the same but of course the further north you are the colder it gets. Hence the impact is greater. The Delmarva peninsula has a lot of really bad weather in the late fall to early spring season with many days of hard rain/sleet and high winds.



This photo was taken in February 2010 during a series of blizzards that blanketed the job site with snow that was measured in feet, not inches. (DelDOT)

Explain how weather impacts (wind, fog, rain) the use of the heavy equipment on site, like the tower crane and other pieces of equipment.

All lifting and hoisting operations are subject to wind impact and good judgment by experienced personnel is a must. For every task performed, the weather and its impact on personnel and equipment must be considered. For example, ice buildup on equipment and daily inspections are important to avoid problems, like ice falling from high elevations.

A Moment of Bridge History

This photo was taken of the Charles W. Cullen Bridge in June 1951. On June 9, 1951, replacement work was completed on the south end of the bridge (the left side of the picture). The replacement was necessary following damage caused by an ice flow. With the piers of the new Indian River Inlet Bridge firmly on dry land, ice flows will never again be an issue for the bridge.

Indian River Inlet: Dangerous Waters

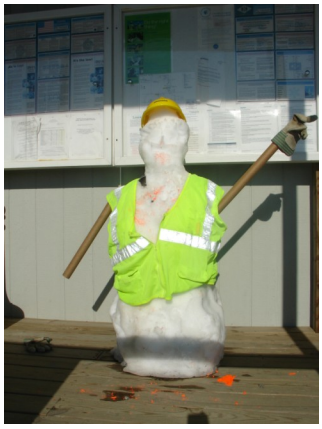
The Indian River Inlet is a place people travel from near and far to go fishing. They either cast their lines from the shore or get into their boats and travel underneath the existing Indian River Inlet Bridge out into the Atlantic Ocean. As anyone will tell you, the inlet is a dangerous environment that is meant to be treated with respect. The waters travel through the inlet at a high velocity (speed) during the changing of the tides throughout the day and night. Along with the strong tide, winds carrying salt particles from the ocean blow constantly, sometimes with a lot of force.

This environment has presented some special working challenges for the men and women building the new Indian River Inlet Bridge. The contract for the project specified that Skanska could not work on the bridge in the waters of the inlet. Taking lessons from the bridges that have stood at the site over the past years, the team made sure to stay as far away from the Inlet as possible and provide a solid deep foundation.

The most visible way that the builders have stayed away from the inlet has just been launched: the form traveler. The form traveler, which was featured in the October edition of the newsletter, was launched in early January.

Photos of the form traveler are on the next page and are featured on the Indian River Inlet Bridge website, irib.deldot.gov.

Have a great winter from all of us at the Indian River Inlet Bridge!



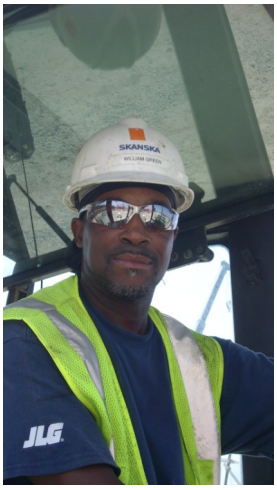
Do you want to take a tour at the site of the new Indian River Inlet Bridge this spring?

You can sign up your class or group to take a tour!

Click Here to Sign Up!

Employee Spotlight!

This is where you get to meet someone who is building the Indian River Inlet Bridge!



What is your name?: William Green

Where are you employed?: Skanska USA, Civil Southeast, Inc.; employed for 4 months

What is your job title?: Carpenter

Where are you from?: Atlanta, GA

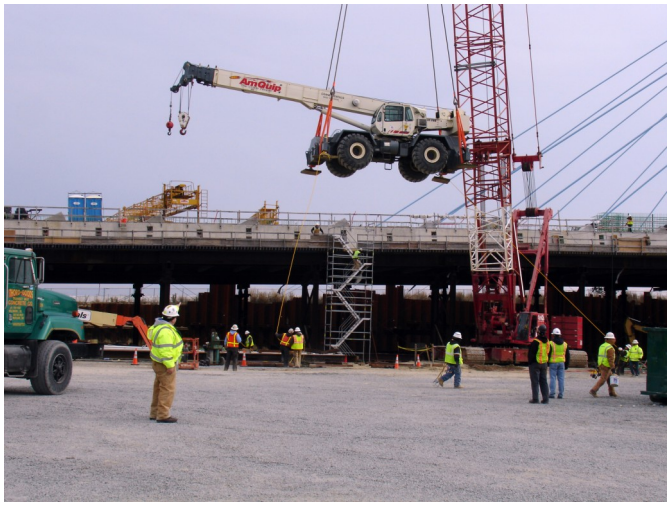
Where do you live now?: Temporary Delaware resident (still call Atlanta home)

What are some special skills that you bring to the project?: I have experience as an equipment operator and I also have post-tensioning cable experience. I'm really a jack of all trades.

What is your favorite part about working on this project?: Working on the cables and learning more about the cable system.

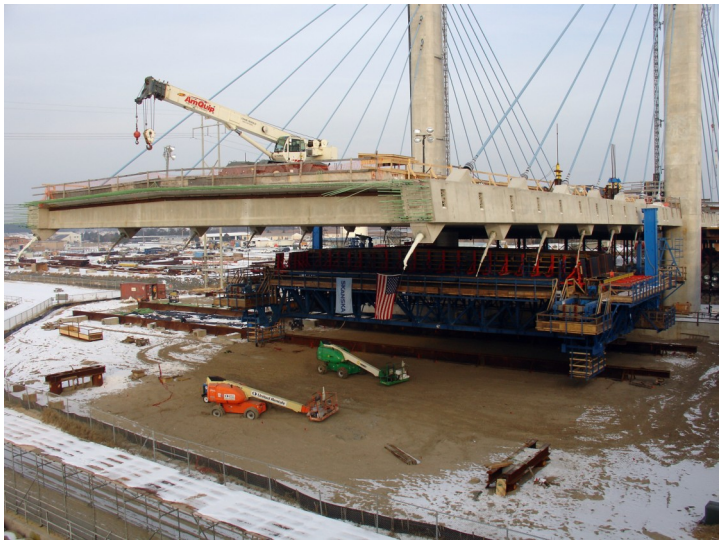
Photos from the Job Site

December 2010



A crane is moved from the ground onto the deck of the new Indian River Inlet Bridge as crews continue to place stay cables (Skanska USA Civil Southeast).

A close up view of the form traveler as it sits underneath the new Indian River Inlet Bridge prior to being raised (Skanska USA Civil Southeast).



The form traveler sits under the new Indian River Bridge as preparations are made to raise it into position to begin work over the inlet (Skanska USA Civil Southeast).

The form traveler is raised into position under the deck of the new Indian River Inlet Bridge and will allow crews to build the deck over the inlet. Both sides of the new bridge have form travelers that will work and meet in the middle of the inlet (Skanska USA Civil Southeast).

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800 Bay Road, P.O. Box 778
Dover, DE 19903
1-800-652-5600 or 302-760-2080
dotpr@state.de.us